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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/648,420	08/26/2003	Charles C. Anderson	83879D-W	3994

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08/04/2004

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EXAMINER

ZACHARIA, RAMSEY E

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/648,420	ANDERSON ET AL.	
	Examiner	Art Unit	
	Ramsey Zacharia	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 36-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 and 41 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>1/9/2004</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-35 and 41, drawn to an article, classified in class 428, subclass 411.1.
 - II. Claims 36-40, drawn to a method, classified in class 427, subclass 58.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the product as claimed can be used in materially different process such as a process by which an electrode pattern is printed on the support using a dry powder coating composition or a process by which a pattern other than that of an electrode is printed on the support.

3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Paul A. Leipold on 21 July 2004 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-35 and 41.

Affirmation of this election must be made by applicant in replying to this Office action. Claims

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36-40 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

6. The Applicant is required to update the cross reference information in the first paragraph of the specification.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 9 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. Claim 9 recites the limitation "said neutral-charge conductivity enhancer" in line 1. There is insufficient antecedent basis for this limitation in the claim.

10. A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim

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does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131 USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claim 20 recites the broad recitation that R¹ and R² represent a C1-C4 alkyl group, and the claim also recites that R¹ and R² are preferably ethylene groups which is the narrower statement of the range/limitation.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1-20, 22-30, 32-35, and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Savage et al. (U.S. Patent 5,665,498).

Savage et al. teach an imaging element comprising a support and an electrically-conductive layer (column 1, lines 7-11). The support may be a polymeric film of polystyrene, polyesters, polycarbonate, glass, or paper (column 5, lines 28-33). The electrically conductive

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layer contains a binder such as gelatin, maleic acid anhydride copolymers, carboxymethyl cellulose, polyvinyl acetate, or polyurethane (column 8, line 66-column 9, line 17). The electrically conductive polymer comprises a mixture of polystyrene sulfonic acid and poly(3,4-ethylene dioxypyrrole) (column 9, lines 20-33). Poly(3,4-ethylene dioxypyrrole) is the polymer of formula I in instant claim 20 in which R^1 and R^2 are ethylene groups. The electrically conductive layer may be applied by x-hopper coating (column 9, lines 59-62). In the embodiments of the Examples, the binder comprises 70 wt% of the layer and the coating weight of the conductive polymer is 330 mg/m^2 ($1100 \text{ total mg/m}^2 \times 30\%$ conductive polymer).

Regarding the limitation of claims 1 (and 2 and 3) that the conductive polymer is such that when a printing solution containing a conductivity enhancing agent contacts the layer the resistivity of the contacted areas decreases by at least a factor of 10 (and 1000 and 100), this is taken to be a function of the material used as the electroconductive polymer. Since the polymer used by Savage et al. appears to be the same as that used in the instant invention, it should also have the property that when a printing solution containing a conductivity enhancing agent contacts the layer the resistivity of the contacted areas decreases by at least a factor of 10 (and 1000 and 100).

Regarding the limitations of claims 4-17, these claims are drawn to further limitations of the conductivity enhancing agent. However, it is noted that the element to which the claims are drawn does not comprise a conductivity enhancing agent. It exhibits a response *when* it is contacted with a conductivity enhancing agent, it is not contacted with a conductivity enhancing agent.

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13. Claims 1-23, 25-30, 32-35, and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Jonas et al. (U.S. Patent 5,300,575).

Jonas et al. teach a composition comprising a polythiophene and a polyanion (column 2, lines 12-31). The polyanion may be a polymeric carboxylic acid or a polysulfonic acid such as polystyrene sulfonic acid (column 2, lines 45-52). The composition is applied as a coating by known methods such as knife coating (column 3, lines 39-47). The composition may further comprise a binder, such as polyvinyl alcohol or polyvinyl acetate (column 4, lines 38-42). Substrates to which the coating may be applied include polycarbonate, polyethylene, polypropylene, polyester, cellulose acetate, and glass (column 5, lines 14-23). The coating is applied at a weight from 1 to 300 mg/m² (column 5, lines 35-37).

Regarding the limitation of claims 1 (and 2 and 3) that the conductive polymer is such that when a printing solution containing a conductivity enhancing agent contacts the layer the resistivity of the contacted areas decreases by at least a factor of 10 (and 1000 and 100), this is taken to be a function of the material used as the electroconductive polymer. Since the polymer used by Jonas et al. appears to be the same as that used in the instant invention, it should also have the property that when a printing solution containing a conductivity enhancing agent contacts the layer the resistivity of the contacted areas decreases by at least a factor of 10 (and 1000 and 100).

Regarding the limitations of claims 4-17, these claims are drawn to further limitations of the conductivity enhancing agent. However, it is noted that the element to which the claims are drawn does not comprise a conductivity enhancing agent. It exhibits a response *when* it is

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contacted with a conductivity enhancing agent, it is not contacted with a conductivity enhancing agent.

Regarding claims 26, 27, and 30, these claims further limit the composition of the binder of claim 20. However, the binder in claim 20 is an optional component. Therefore, the limitations of claims 26, 27, and 30 are met because the limitations of these claims are drawn to an optional component.

14. Claims 1-20, 22, 23, 25-35, and 41 are rejected under 35 U.S.C. 102(b) as being anticipated by Cloots et al. (EP 1,054,414).

Cloots et al. teach an electrode pattern printed on a conductive polymer wherein the conductive polymer has been applied to a substrate at a coating weight of 10-5000 mg/m² (paragraph 0009). The printing can proceed by offset printing, screen printing, or ink jet printing (paragraph 0012). In one embodiment, the conductive polymer is a mixture of polyethylene-dioxythiophene and polystyrene sulphonic acid (paragraph 0017). In the Examples, polyethylene terephthalate, a transparent polyester, is used as the substrate (paragraph 0020).

Regarding the limitation of claims 1 (and 2 and 3) that the conductive polymer is such that when a printing solution containing a conductivity enhancing agent contacts the layer the resistivity of the contacted areas decreases by at least a factor of 10 (and 1000 and 100), this is taken to be a function of the material used as the electroconductive polymer. Since the polymer used by Cloots et al. appears to be the same as that used in the instant invention, it should also have the property that when a printing solution containing a conductivity enhancing agent contacts the layer the resistivity of the contacted areas decreases by at least a factor of 10 (and

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1000 and 100). Moreover, although the printing process described by Cloots et al. results in a decrease in the conductivity of the polymer, one would still expect the conductivity of the polymer to increase when it contacts a solution containing a conductivity enhancing agent since it is the same material as used in the instant invention.

Regarding the limitations of claims 4-17, these claims are drawn to further limitations of the conductivity enhancing agent. However, it is noted that the element to which the claims are drawn does not comprise a conductivity enhancing agent. It exhibits a response *when* it is contacted with a conductivity enhancing agent, it is not contacted with a conductivity enhancing agent.

Regarding claims 25-30, these claims further limit the composition of the binder of claim 20. However, the binder in claim 20 is an optional component. Therefore, the limitations of claims 25-30 are met because the limitations of these claims are drawn to an optional component.

Double Patenting

15. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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16. Claims 1-30 and 32 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 4, 21-23, and 25-30 of copending Application No. 10/648,418. Although the conflicting claims are not identical, they are not patentably distinct from each other because the inventions of instant claims 1-30 and 32 represent a genus of which the inventions described by claims 21-23 and 25-30 of copending Application No. 10/648,418 are species. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993). Instant claims 1-30 and 32 require only that when a printing solution containing a conductivity enhancing agent contacts the layer the resistivity of the contacted areas decreases by at least a factor of 10. The electrographic developer composition and marking particles of claims 1 and 4, respectively in Application No. 10/648,418 represent species of the broad genus that is all conductivity enhancing agents.

Claims 4-17 are included in the rejection because these claims further limit an agent that is not actively present as part of the claimed article.

Claims 25-30 are included in the rejection because the limitations of these claims are drawn to an optional component.

Claim 32 is included because it only adds a product-by-process type limitation and when the prior art discloses a product which reasonably appears to be either identical with or only slightly different than a product claim in a product-by-process claim, the burden is on the applicant to present evidence from which the examiner could reasonably conclude that the claimed product differs in kind from those of the prior art. See MPEP § 2113.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.


Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ramsey Zacharia whose telephone number is (571) 272-1518.

The examiner can normally be reached on Monday through Friday from 9 to 5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Thibodeau, can be reached on (571) 272-1516. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Ramsey Zacharia
Primary Examiner
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